

**REMARKS**

Claims 1-43 are pending in the application. Applicant respectfully requests entry of the foregoing amendment to claims 1, 12, 14, 16, 33, 35, and 37 prior to further examination. No new matter has been introduced. Acceptance is respectfully requested.

**Allowable Subject Matter**

The Applicant thanks the Examiner for the indication of allowable subject matter.

The Examiner stated that claims 12, 14, 16, 33, 35, and 37 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Claims 12, 14, 16, 33, 35, and 37 have now been rewritten in independent form including all of the limitations of the independent claims from which they depend and any intervening claims, and therefore are now in condition for allowance.

**Drawing Objections**

The drawings have been amended as described above. Acceptance is respectfully requested.

**35 U.S.C. § 112 Rejection**

Claim 1 has been rejected as having insufficient antecedent basis for the claim limitation “the central transceiver device.”

Claim 1 has been amended to correct the antecedent basis for “the central transceiver device” as recited in lines 12 and 13. Claim 1 now recites “a” central transceiver device.

**35 U.S.C. § 102 Rejection**

Claims 1-4, 10, 11, 20-25, 31, 32, and 40 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Mahany (U.S. Patent No. 6,697,415).

The present invention provides a system and method for managing transmission constraints based on subscriber device capabilities. The system and method allow transmission

constraints to be set for each user to maximize throughput in a wireless telecommunications network. First, a set of device capabilities (for example, antenna type and/or mobility) corresponding to a local transceiver device or subscriber access unit connected to the user in the wireless telecommunications network is determined. Next, the device capabilities are registered with a central transceiver device such as a base station processor, which is in wireless communication with the local transceiver device. A set of transmission constraints (for example, power level and/or error correction) is then computed based on the device capabilities, and the transmission constraints corresponding to the transceiver device are applied to the wireless transmissions between the transceiver device and the central transceiver device. (See, Figs. 4a-4c and Specification page 7, line 16 through page 8, line 15).

Mahany provides a mechanism for a wireless access device (2A-2C) to dynamically attempt to select a common mode of appropriation for each participating device (4A-4C) within its cell. The wireless access device (2A-2C) manages ongoing communication within its cell with a previously selected mode and mode parameters. If a new device, 4A for example, wanders into the cell of 2A for example, the wireless access device 2A identifies the available modes of operation of the new device 4A. The wireless access device 2A stores the available modes of operation of the new device 4A in a mode table 407 (Fig. 1B). If the new device 4A is capable of operating in the currently selected mode, the wireless access device 2A communicates mode information and parameters to the new device 4A. Thereafter, the wireless access device 2A returns to servicing all participating devices, 4B and 4C for example, including the new device 4A in the current mode with current parameters.

If the new device 4A is not capable of operating in the current mode, the wireless access device 2A attempts to select a new mode for all participating devices (4A-4C) within its cell. If at least one common mode can be found, e.g., if all the participating devices (4B and 4C) and the new device 4A have at least one common mode, the wireless access device 2A chooses the common mode and broadcasts the mode and parameter information to all participating devices (4A-4C) and changes its own mode. Thereafter, the wireless access device 2A returns to service ongoing communication in the newly chosen mode.

The wireless access device 2A continues to monitor performance of all participating devices (4A-4C) within its cell and compares the performance to other common modes of operation. If the wireless access device 2A decides another common mode would provide better performance than the current mode, the wireless access device 2A chooses the other common mode and broadcasts the mode and parameter information to all participating devices (4A-4C) and changes its own mode. Thereafter, the wireless access device 2A returns to service ongoing communication in the newly chosen mode. (See Mahany, col. 15, line 6 through col. 16, line 18 and Figs. 1A and 1B).

Mahany determines a common mode of operation and does not teach or otherwise suggest determining a set of device capabilities as is claimed in the present invention. That is, what common mode of operation a device may operate in is not the same as a set of device capabilities of a particular device, for example antenna type and/or mobility. Further, Mahany changes between common modes of operation to provide better performance and does not teach or otherwise suggest computing a set of transmission restraints as claimed in the present invention. That is, Mahany changes the common mode of operation of all devices within its cell, whereas each individual device in a cell of the present invention may have a different set of transmission restraints. Claims 1 and 21 of the present invention contain these limitations and are therefore allowable. The withdrawal of the rejections of claims 1 and 21 is respectfully requested.

Claims 2-4, 10, 11, 20, 22-25, 21, 32, and 40 depend for allowable base claims and are allowable for the same reasons.

### 35 U.S.C. § 103 Rejection

Claims 5, 6-9, 13, 15, 17, 18, 19, 26, 27-30, 34, 36, 38, 39, and 41-43 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mahany in view of several references.

As mentioned above, Mahany does not teach or otherwise suggest the limitations of independent claims 1 and 21. Therefore, dependent claims 5, 6-9, 13, 15, 17, 18, 19, 26, 27-30, 34, 36, 38, and 39 are allowable for the same reasons. The withdrawal of the rejections of dependent claims 5, 6-9, 13, 15, 17, 18, 19, 26, 27-30, 34, 36, 38, and 39 is respectfully requested.

Claims 41-43 contain similar limitations as in claims 1 and 21, namely "determining a set of device capabilities corresponding to a transceiver device" and "computing a set of transmission constraints based on the device capabilities." As mentioned above, Mahany does not teach or otherwise suggest these limitations, as such claims 41-43 are allowable. The withdrawal of the rejections of claims 41-43 is respectfully requested.

### CONCLUSION

In view of the above amendments and remarks, it is believed that all claims (1-43) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 

Joseph M. Maraia

Registration No. 55,926

Telephone: (978) 341-0036

Facsimile: (978) 341-0136

Concord, MA 01742-9133

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Appl'n No.: 09/841,695  
Title: Wireless Subscriber Network Registration...  
Inventors: James A. Proctor, Jr., *et al.*  
Annotated Marked-Up Drawings

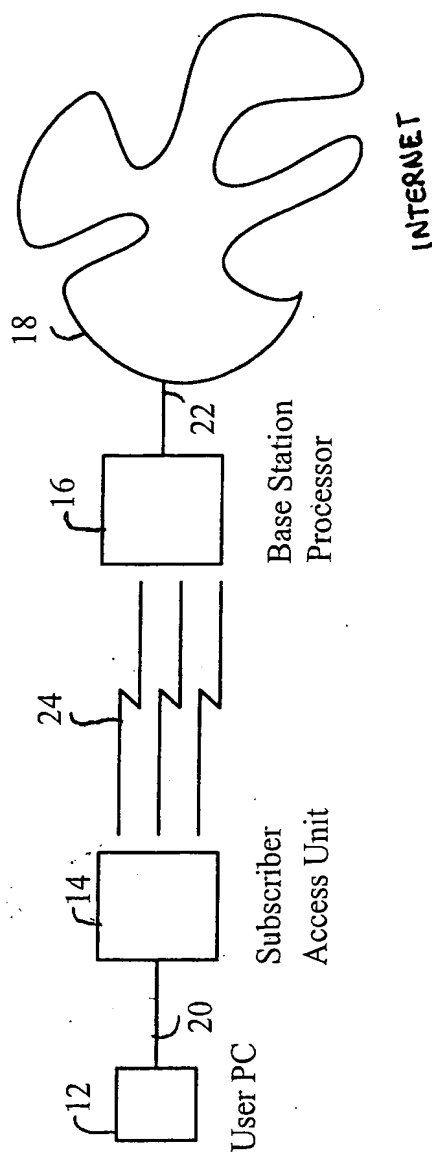


FIG. 1

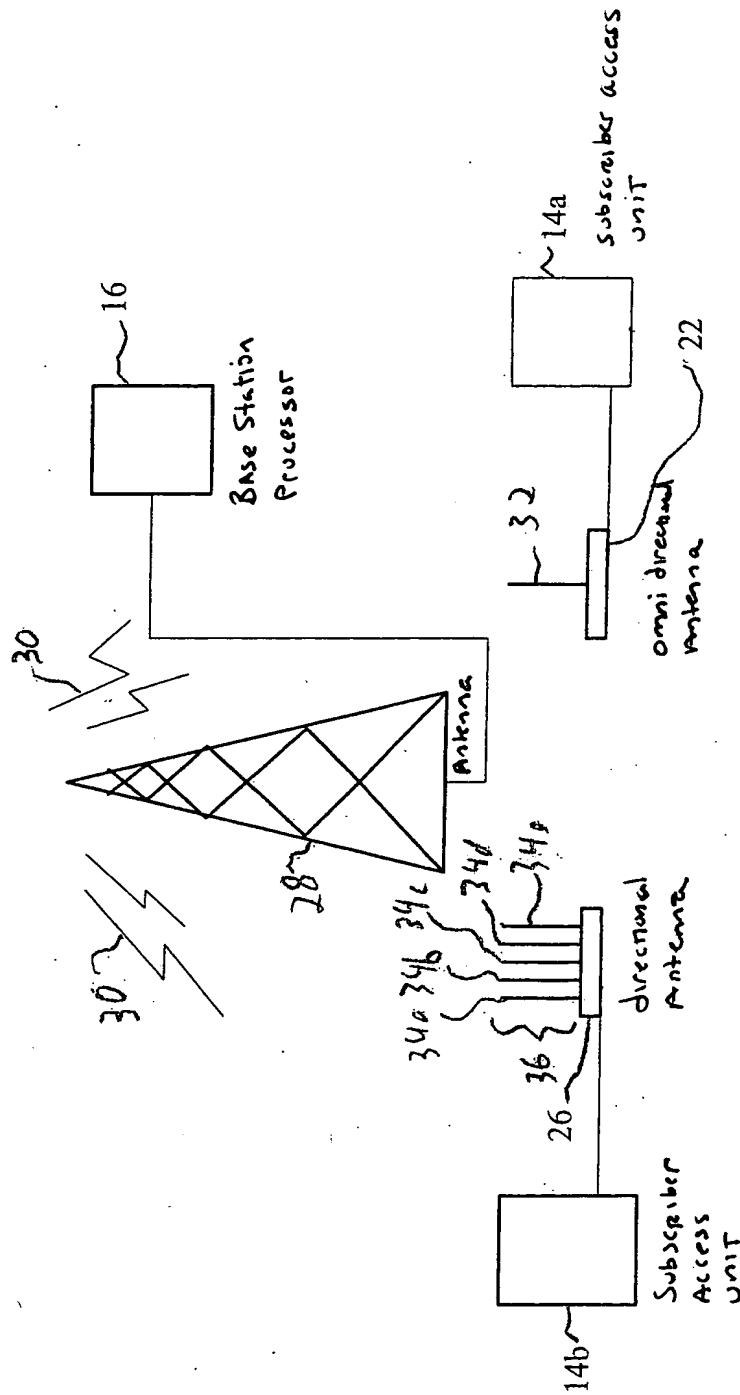


FIG. 2